

Sub
A1

<120> HLA Class I A2 Tumor Associated Antigen
Peptides and Vaccine Compositions /

<140> US Not yet assigned

<150> US 09/016,361

<150> US 60/036,696

<160> 57

<210> 1

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<212> PRT

<213> Artificial Sequence

 $\langle 220 \rangle$

<223> CEA.233V10

<400> 1

 $\langle 210 \rangle$ 2

<211> 9

<212> PRT

<213> Artificial/ Sequence

 $\langle 220 \rangle$

<223> CEA. 605V/9

<400> 2

 $\langle 210 \rangle$ 3

<211> 9

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<223> CEA.687

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<220>
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Leu Leu Pro Glu Asn Asn Val Leu Ser Pro Val
1 5 10

<210> 5
<211> 9
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<220>
<223> p53.139L2

<400> 5
Lys Leu Cys Pro Val Gln Leu Trp Val
1 5

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<223> p53.139L2B3

<400> 6
Lys Leu Asx Pro Val Gln Leu Trp Val
1 5

<210> 7
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<220>
<223> p53.149L2

<400> 7
Ser Leu Pro Pro Pro Gly Thr Arg Val
1 5

<210> 8
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<223> p53.149M2

<400> 8
 Ser Met Pro Pro Pro Gly Thr Arg Val
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<400> 8

<211> 9

<213> Artificial Sequence

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<400> 9
Lys Leu Phe Gly Ser Leu Ala Phe Val
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$\langle 211 \rangle$ 9

<213> Artificial Sequence

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Lys Val Phe Gly Ser Leu Ala Phe Val
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$\langle 211 \rangle$ 10

<213> Artificial Sequence

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$\langle 211 \rangle$ 9

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<211> 9

<213> Artificial Sequence

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<210> 24
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<223> MAGE2.157

<400> 24
Tyr Leu Gln Leu Val Phe Gly Ile Glu Val
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<210> 25
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<220>
<223> Her2/neu.952

<400> 25
Tyr Met Ile Met Val Lys Cys Trp Met Ile
1 5 10

<210> 26
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<220>
<223> tetanus toxoid positions 830-843,
standard peptide 553.01

<400> 26
Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu
1 5 10

<210> 27
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<220>
<223> Plasmodium falciparum CS protein positions 378-398

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Asp Ile Glu Lys Lys Ile Ala Lys Met Glu Lys Ala Ser Ser Val Phe
1 5 10 15
Asn Val Val Asn Ser
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<210> 28
<211> 16
<212> PRT
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<220>
<223> Streptococcus 18kD protein position 116

<400> 28
Gly Ala Val Asp Ser Ile Leu Gly Gly Val Ala Thr Tyr Gly Ala Ala
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<210> 29
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<220>
<223> pan-DR binding epitope peptide

<221> MOD_RES
<222> (3)...(3)
<223> Xaa = cyclohexylalanine, Phe or Tyr

<221> MOD_RES
<222> (7)...(7)
<223> Xaa = Trp, Tyr, His or Asn

<400> 29
Ala Lys Xaa Val Ala Ala Xaa Thr Leu Lys Ala Ala Ala
1 5 10

<210> 30
<211> 13
<212> PRT
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<220>
<223> alternative preferred PADRE peptide

<221> MOD_RES
<222> (3)...(3)
<223> Xaa = cyclohexylalanine

<400> 30
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1 5 10

<210> 31
<211> 13
<212> PRT
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<220>
<223> alternative preferred PADRE peptide

<400> 31
Ala Lys Phe Val Ala Ala Trp Thr Leu Lys Ala Ala Ala
1 5 10

<210> 32
<211> 13
<212> PRT
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<220>
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Ala Lys Tyr Val Ala Ala Trp Thr Leu Lys Ala Ala Ala
1 5 10

<210> 33
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<400> 33
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1 5 10

<210> 34
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<220>
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<221> MOD_RES
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<223> Xaa = cyclohexylalanine

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1 5 10

<210> 35
<211> 13
<212> PRT
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<220>
<223> alternative preferred PADRE peptide

<400> 35
Ala Lys Tyr Val Ala Ala Tyr Thr Leu Lys Ala Ala Ala
1 5 10

<210> 36
<211> 13
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<220>
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<400> 36
Ala Lys Phe Val Ala Ala His Thr Leu Lys Ala Ala Ala
1 5 10

<210> 37
<211> 13
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<220>
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<221> MOD_RES
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<223> Xaa = cyclohexylalanine

<400> 37
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1 5 10

<210> 38
<211> 13
<212> PRT
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<220>
<223> alternative preferred PADRE peptide

<400> 38
Ala Lys Tyr Val Ala Ala His Thr Leu Lys Ala Ala Ala
1 5 10

<210> 39
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
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<400> 39
Ala Lys Phe Val Ala Ala Asn Thr Leu Lys Ala Ala Ala
1 5 10

<210> 40
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<220>
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<221> MOD_RES
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<223> Xaa = cyclohexylalanine

<400> 40
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1 5 10

<210> 41
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<220>
<223> alternative preferred PADRE peptide

<400> 41
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1 5 10

<210> 42
<211> 9
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<220>
<223> standard peptide 944.02

<400> 42
Tyr Leu Glu Pro Ala Ile Ala Lys Tyr
1 5

<210> 43
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<223> standard peptide 941.01

<400> 43
Phe Leu Pro Ser Asp Tyr Phe Pro Ser Val
1 5 10

<210> 44
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<220>
<223> standard peptide 1072.34

<400> 44
Tyr Val Ile Lys Val Ser Ala Arg Val
1 5

<210> 45
<211> 10
<212> PRT
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<220>
<223> standard peptide 941.12

<400> 45
Lys Val Phe Pro Tyr Ala Leu Ile Asn Lys
1 5 10

<210> 46
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<400> 46
Ala Val Asp Leu Tyr His Phe Leu Lys
1 5

<210> 47
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<400> 47
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1 5 10

<210> 48
<211> 9
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<220>
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<400> 48
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1 5

<210> 49
<211> 9
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<220>
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<400> 49
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<210> 50
<211> 9
<212> PRT
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<210> 51
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<220>
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<400> 51
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1 5 10

<210> 52
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<220>
<223> standard peptide 829.02

<400> 52
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1 5 10

<210> 53
<211> 14
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<220>
<223> standard peptide 717.01

<400> 53
Tyr Ala Arg Phe Gln Ser Gln Thr Thr Leu Lys Gln Lys Thr
1 5 10

<210> 54
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<212> PRT
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<220>
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<210> 55
<211> 14
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<220>
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<400> 55
Gln Tyr Ile Lys Ala Asn Ala Lys Phe Ile Gly Ile Thr Glu
1 5 10

<210> 56
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<212> PRT
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<223> standard peptide 507.02

Gly Arg Thr Gln Asp Glu Asn Pro Val Val His Phe Phe Lys Asn Ile
1 5 10 15
Val Thr Pro Arg Thr Pro Pro Pro
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$\langle 211 \rangle$ 13

<213> Artificial Sequence

<223> standard peptide 511

Asn Gly Gln Ile Gly Asn Asp Pro Asn Arg Asp Ile Leu
1 5 10